

We claim:

1. A test sample preparation device for simultaneously preparing multiple samples directly into vials coupled to a sampler tray, the device comprising:

5 a housing having an opening, an interior and an exterior, the housing including a vacuum channel, the vacuum channel providing fluid communication between the interior and the exterior of the housing and being capable of coupling a vacuum source to the interior of the housing;

10 a filter assembly disposed over the opening of the housing, the filter assembly including a plurality of wells, each well having two open ends, and a plurality of porous media disposed in the wells, respectively;

a sampler tray removably disposed in the housing; and

a plurality of vials removably coupled to the sampler tray, the vials being in liquid receiving relationship with the wells, respectively.

15 2. A filter assembly for simultaneously preparing multiple samples directly into vials, the filter assembly comprising:

a cover defining an impervious wall; and

20 a plurality of wells unitarily formed in the wall, each well having first and second open ends defining a fluid flow path through the wall of the cover via the well between the first end of the well and the second end of the well, wherein each well includes a support and a porous medium mounted to the support, the support extending across the fluid flow path of the well and contacting the porous medium whereby fluid flowing through the well from the first end of the well to the second end of the well flows through the porous medium
25 and past the support, the first end of the well being upstream of the porous medium and the second end of the well being downstream of the porous medium, wherein the second end of the well comprises a tubular protrusion which, when a vial is placed in liquid receiving relationship with the well, is capable of extending into the vial to minimize cross-contamination.

30 3. A housing which holds a sampler tray containing vials for receiving a liquid sample, the housing comprising:

a generally cylindrical body including open and closed ends and having an interior

and an exterior;

a vacuum channel providing fluid communication between the interior of the cylindrical body and the exterior of the cylindrical body; and

a key mechanism including a post having first and second ends, the first end of the post being attached to the closed end of the cylindrical body, an annular protrusion disposed at the second end of the post, and a notch disposed within the annular protrusion, wherein the key mechanism is arranged to orient the sampler tray and the vials with respect to the housing.

10 4. A method for simultaneously preparing multiple test samples for automated liquid chromatography, the method comprising:

depositing test samples into a plurality of wells;

simultaneously passing the test samples through porous media disposed in the wells;

and

15 depositing the filtered test samples directly into vials removably coupled to a sampler tray.

5. A method for automated liquid chromatography comprising:

depositing test samples into a plurality of wells;

20 simultaneously passing the test samples through porous media disposed in the wells;

depositing the filtered test samples directly into vials removably coupled to a sampler tray; and

directing the filtered test samples contained in the vials removably coupled to the sampler tray through an automated liquid chromatography device.